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American Indians and Alaska Natives—Overview of the Population

SYNOPSIS

THE ESTIMATED TWO MILLION American Indians and Alaska Natives, while sharing certain genetic traits, belong to groups with distinct social, cultural, political, and biomedical attributes. They share with certain other ethnic minorities high poverty rates, low educational attainment, increased susceptibility to certain diseases, and elevated mortality rates. Hypertension has been reported less frequently among American Indians compared to other U.S. groups, but is increasing in frequency, is strongly associated with obesity and diabetes, and is synergistically associated with diabetes in the etiology of end-stage renal disease.

The first priority for dealing with hypertension among American Indians is to maximize efforts toward control. The Indian Health Service (IHS) provides such an opportunity, which is not as readily available to other minorities.

In addition to controlling hypertension, areas of fruitful investigation include studies relating hypertension to acculturation, physiology of peripheral adrenergic vasoreceptors, salt and water metabolism, and prevention or amelioration of end-stage renal disease. Understanding some of these basic processes will prove valuable for American Indians and Alaska Natives as well as the entire population.

American Indian and Alaska Native descendants of Asian groups migrating to North America across the Bering Strait, possess genetic, cultural, and political attributes that distinguish them from the rest of the U.S. population (1-3). This group, designated here as American Indian, also exhibits great internal ethnic, cultural, and social diversity. These attributes, along with a special relationship with the Federal Government, result in unique biomedical consequences. The devastating pandemics of infections following contact with Europeans have been largely replaced by metabolic and behaviorally modulated conditions, closely associated with acculturation processes, for example, diabetes, obesity, alcohol abuse, injuries, cancer, and heart disease.

Demographic Characteristics of American Indians

The approximately two million Americans who identify themselves as American Indian or Alaska Native share a number of adverse socioeconomic conditions with certain other U.S. minorities, including lower educational achievement, higher unemployment, and lower income, all of which have been associated with increased morbidity and mortality rates (4). Slightly more than one-half of American Indians now live in urban areas where access to care, including that provided by the Indian Health Service (IHS), is often difficult. This holds true for the collection of health information.

The estimated median age of American Indians is 24.2 compared to 32.9 for the general U.S. population and 34.4 for U.S. whites. Only 5.7% of American Indians are age 65 or older compared to 12.6% for all races. Among American Indians, the ratio of males to females is slightly higher before age 29, when the ratio is about equal. There are more females than males after age 39, a situation not seen in whites until ages 40 to 49.

Certain American Indians have had a unique relationship with the Federal Government, one result of which was the establishment of the IHS, a nationwide system of preventive and therapeutic care. Notwithstanding the putative universal access provided by the IHS and its special efforts to reach all Indians, the latter still continue to suffer from a number of health problems, including hypertension. Nevertheless, American Indians' health has improved remarkably during the past 40 years, with the notable exceptions of heart disease, cancer, and diabetes. However, age-specific mortality rates for American Indians under age 60 remain higher than those for the general population. Although the mortality rate for heart disease is somewhat less than that for the general population, it is now the leading cause of death among American Indians.

American Indians and Hypertension

Earlier investigations reported relatively low rates of hypertension in nondiabetic American Indians (5). However, the incidence is increasing (6,7). Hypertension accounts for 4.2% of all IHS ambulatory visits, exceeded only by upper respiratory infections, otitis media, and diabetes. An important aspect of hypertension among American Indians is its strong association with diabetes and the apparent synergistic increase in morbidity when the two occur together (8).

Discussion

Because of its increasing incidence, its strong association with diabetes, and the increased morbidity when it accompanies the latter, hypertension among American Indians requires attention. The immediate concern is to

implement programs designed to ensure appropriate control in the American-Indian population. In addition, some of the important questions to be resolved for American Indians are:

- What is the relationship of acculturation to hypertension?
- What is the relation of age to hypertension?
- Normotensive American Indians appear to have a lower average blood pressure compared with the general population. Is this beneficial?
- Have normal values for blood pressure been established?
- What is the synergism between hypertension and obesity and between hypertension and diabetes in end-stage renal disease?
- Can end-stage renal disease among American Indians be prevented by use of angiotensin-converting enzyme inhibitors?
- Are there fundamental differences in water and salt metabolism between American Indians and the general population? Are there important differences in adrenergic receptors in the peripheral vasculature of American Indians compared with the general population?

The Strong Heart Study sponsored by the National Heart, Lung, and Blood Institute is making substantial progress in dealing with some of these questions (9). The current symposium represents increasing intensity of the study of hypertension among American Indians. As with other diseases and conditions, the information gained will undoubtedly be beneficial not only to American Indians, but to all citizens.

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